Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz	)	GN Docket 17-183

COMMENTS OF EWTN, INC.

The Eternal Word Television Network, Inc.("EWTN") by its attorneys, pursuant to the Notice of Inquiry in GN Docket No. 17-183, released August 3, 2017 ("NOI"), respectfully submits herewith its comments.

I. Background

EWTN Global Catholic Network, in its 36th year, is the largest religious media network in the world. EWTN's 11 networks broadcast in multiple languages 24 hours a day, seven days a week to nearly 6,000 affiliates serving over 270 million television households in more than 145 countries and territories. The EWTN programming is delivered via direct broadcast satellite television and radio services; radio services transmitted through SIRIUS/XM, iHeart Radio, 2,493 domestic and 5,869 international cable television operators and over 500 domestic and international AM & FM radio affiliates.

EWTN airs commercial-free family and religious programs from a Catholic perspective. The Programming is available in English, Spanish, German and French. More than 80% of the programming carried on EWTN is original. The networks' diverse programs include live call-in talk shows, news programs, inspiring original series, thought-provoking documentaries and films, teaching series with noted theologians, entertaining children's shows, live coverage of the Pope and important Church events, a live daily Mass, devotions, concerts, music, and much more.

While EWTN's programming is created from a Catholic perspective, viewer feedback clearly indicates that EWTN's audience includes people of all ages as well as those of many different faith backgrounds (including no faith).

EWTN is commenting in this proceeding because the NOI could substantially interfere with the ability of over 270 million consumers world wide to view programming of substantial interest to them.

The Commission has asked commenting parties to address how existing service rules governing GSO FSS and FS could be modified to further promote flexible use in this band, stimulate investment, and encourage more intensive deployment in the 3.7-4.2 GHz band for wireless broadband. Specifically, the FCC has asked:

- What licensing and service rules would effectively facilitate coexistence between various licensees in the band and facilitate the deployment of new broadband networks?
- Are there particular licensing frameworks or technical rules that would more effectively promote investment in the band?
- Are there opportunities to create higher-capacity links by licensing larger channels in the band for FS or mobile?
- Are there pairing opportunities between this band and other spectrum bands for fixed or mobile services?
- Are there opportunities to incentivize relocation or repacking of incumbent licensees to make more spectrum available for flexible broadband use?
- Are there elements of the database-supported authorization framework used for the Citizens Broadband Radio Service in the 3.55-3.7 GHz band that would be appropriate?
- Are there alternate approaches that could better address the unique ecosystem of the 3.7-4.2 GHz band?
- Are there innovative approaches to promote coexistence between users and minimize the potential for harmful interference between and among licensees in the band.

Commenters were asked to discuss how potential modifications to the service rules could promote more robust and efficient use of spectrum resources, minimize the potential for harmful interference, and maximize flexibility for licensees to meet the needs of their end users. EWTN's response to these inquires is below.

II. EWTN Comments

The NOI fundamentally gets the proverbial cart before the horse. The NOI and comments filed to date in related spectrum sharing proceedings[1] make it clear that there is no proven method today to protect the close to 5,000 registered Earth Stations through out the United States that receive and distribute television programming and which are an integral link in the chain which distribute programming to the 99 million plus homes that receive multichannel video programming[2].

The NOI is founded on the fundamental assumption that C-band up and down links can peacefully coexist using present day techniques. The assumption of peaceful coexistence runs

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[1] *NOI* at Footnote 14 and para. 28.See also: *Opposition of the Satellite Industry Association*, RM-11791 (filed Aug. 7, 2017) ("SIA Opposition"); *Reply Comments of the Satellite Industry Association*, RM-11791 (filed Aug. 22, 2017); *Reply Comments of the Intelsat License, Inc.*, RM-11791 (filed Aug. 22, 2017); *and Ex Parte* of ViaSat, Inc., GN Docket No. 14-177; IB Docket Nos. 15-256 & 97-95; RM-11664; and WT Docket No. 10-112 (July 1, 2016).

[2] *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming (Eighteenth Report)*, 32 FCC Rcd 568 (FCC 2017) at paragraph 68; See also 19 July 2017 *Ex Parte* in GN 17-183 by Intelsat License, Inc.

contrary to both theoretical studies and practical real world applications which both predict substantial interference problems and document that interference will exist and create substantial disruption to the delivery of video programming and information.[3]

Indeed, the very nature of the specific questions raised by the Commission and listed above make it very clear that currently there are no proven methods for spectrum sharing between 3.7 and 24 GHz. Specifically:

- There are currently no rules that effectively facilitate coexistence between various licensees in the band and facilitate the deployment of new broadband networks.
- There are no proven licensing frameworks or technical rules that would more effectively promote investment in the band.
- There are no existing database-supported authorization framework which have been effectively used for the Citizens Broadband Radio Service that would be appropriate in the 3.55-3.7 GHz band.
- There are no existing tested alternate approaches that could address the unique ecosystem of the 3.7-4.2 GHz band.
- There are no proven examples where there has been coexistence between users which minimizes the potential for harmful interference between and among licensees in the band.[4]

While the FCC's efforts to open up spectrum for wireless uses are laudable, it would seem far more prudent to first determine if there are spectrum sharing techniques that could be employed which will not cause catastrophic interference to existing users. Failure to find a proven sharing method before opening up this band for sharing will have real world adverse effects on a substantial portion of the American television viewers who can only get their television programming as part of an integrated delivery system that depends on the C-band for up-link and downlinks. EWTN maybe a smaller distribution network than others but the consequences to it will be replicated across the television ecosystem.

EWTN presently uses 6.015125 GHZ to upload its programming and 3.790075 GHZ to download its signal its subscribers.

Virtually all of EWTN and EWTN Español affiliates in the US receive their signal by C-band. In addition, a large percentage of EWTN's international distribution would be jeopardized

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[3] See: *Report ITU-R S.2368* at 31which demonstrated that demonstrates that it is impractical for FSS networks to share C-band downlink spectrum with IMT-Advanced stations; and *International Associations of the Satellite Communications Industry, Position Paper on Interference in C-band by Terrestrial Wireless Applications to Satellite Applications* at 1-3, ITU Workshop on Market Mechanisms for Spectrum Management (2007), available at: http://www.itu.int/osg/spu/stn/spectrum/workshop_proceedings/Background_Papers_Final/C-band%20Interference%20-%20Global%20Position%20Paper%20for%20ITU%20%20%20%20%20%20spectrum%20workshop.pdf. which documented the 300 million households throughout Asia that lost service and the loss of the World Cup games in Bolivia when interference interrupted the satellite signals carrying the games.

[4] Id.

as well since C-band is a vital part of our current television and radio distribution system.[5] In addition to these television homes, tens of millions of potential radio listeners worldwide would be at risk if this service is interrupted. Moreover, EWTN estimates that it delivers its signal to approximately 1,423 rural MVPDs which provide service to approximately 1.8 million subscribers.

Accordingly, for the reasons stated above, it is respectfully requested that until there is a proven method to prevent interference to its existing use of the C-band to uplink and downlink its signal, the Commission should not reallocate this spectrum to force sharing between wireless users and C-Band users.

Respectfully submitted,

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[5] EWTN currently provides service to the following number of television homes: United States: 91,299,988; US Territories: 65,547 International: 181,736,054